

WHAT IS CLAIMED IS:

1. A method of preparing a *Tricholoma matsutake*-infected young pine tree, comprising the steps of:

5        inoculating fungal mycelia obtained by pulverizing *T. matsutake* fruit bodies liquid-cultured in PDB medium into the bottom of a sterilized culture container at an amount of 0.01-0.02 mg dry weight/mL sterile water;

         mixing perlite and sphagnum peatmoss at a ratio of 80:1-2,  
10        and placing the resulting mixed soil onto the inoculated fungal mycelia;

         preparing K-liquid medium containing 1.65 g of  $\text{NH}_4\text{NO}_3$ , 0.2 g of  $\text{KNO}_3$ , 0.002 g of  $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$ , 0.02 g of KCl, 0.2 g of  $\text{KH}_2\text{PO}_4$ , 0.9 g of  $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ , 0.2 g of  $(\text{NH}_4)_2\text{HPO}_4$ , 0.5 g of  $\text{NH}_4\text{-Tar}$ , 0.5 ml  
15        of Fe-Cit, 0.031 g of  $\text{H}_3\text{BO}_3$ , 0.01516 g of  $\text{MnSO}_3 \cdot 4\text{H}_2\text{O}$ , 0.0086 g of  $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$ , 0.00083 g of KI, 0.00025 g of  $\text{Na}_2\text{MoO}_4 \cdot 2\text{H}_2\text{O}$ , 100  $\mu\text{g}$  of Thiamine HCl, 1.0 g of malt extract, 0.5 g of yeast extract, 0.3 g of casein and 3.0 g of glucose per 1 L in water, adjusting pH of the medium to pH 5.5-5.6, and aliquotting the  
20        K-liquid medium onto the mixed soil;

         aseptically germinating pine seeds up to 3 cm in length, planting the resulting aseptic seedlings into infection medium containing the mixed soil and the K-liquid medium, and covering the culture container with a lid; and

25        coculturing the pine seedling and the *T. matsutake* mycelia at 15-25°C for 24 hrs under 10-40,000 lux light intensity.

2. The method as set forth in claim 1, prior to the step

of inoculating the fungal mycelia obtained by pulverizing *T. matsutake* fruit bodies liquid-cultured in PDB medium into the bottom of the sterilized culture container, further comprising the step of preparing K-solid medium containing 1.65 g of  
5  $\text{NH}_4\text{NO}_3$ , 0.2 g of  $\text{KNO}_3$ , 0.002 g of  $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$ , 0.02 g of KCl, 0.2 g of  $\text{KH}_2\text{PO}_4$ , 0.9 g of  $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ , 0.2 g of  $(\text{NH}_4)_2\text{HPO}_4$ , 0.5 g of  $\text{NH}_4$ -Tar, 0.5 ml of Fe-Cit, 0.031 g of  $\text{H}_3\text{BO}_3$ , 0.01516 g of  $\text{MnSO}_3 \cdot 4\text{H}_2\text{O}$ , 0.0086 g of  $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$ , 0.00083 g of KI, 0.00025 g of  $\text{Na}_2\text{MoO}_4 \cdot 2\text{H}_2\text{O}$ , 100  $\mu\text{g}$  of Thiamine HCl, 1.0 g of malt extract, 0.5  
10 g of yeast extract, 0.3 g of casein, 10.0 g of glucose and 2.0 g of phytigel per 1 L in distilled water, adjusting pH of the K-solid medium to pH 5.5-5.6, and aliquotting the K-solid medium into the culture container.

15 3. The method as set forth in claim 1, wherein a paper cup is tightly inserted into the culture vessel.

4. The method as set forth in claim 2, wherein the K-solid medium is aliquotted onto the bottom of the culture  
20 container at a thickness of 0.5 mm to 2 cm.

5. A *Tricholoma matsutake*-infected young pine tree, prepared by a process comprising the steps of:  
inoculating fungal mycelia obtained by pulverizing *T.*  
25 *matsutake* fruit bodies liquid-cultured in PDB medium into the bottom of a sterilized culture container at an amount of 0.01-0.02 mg dry weight/mL sterile water;

mixing perlite and sphagnum peatmoss at a ratio of 80:1-2, and placing the resulting mixed soil onto the inoculated fungal

mycelia;

preparing K-liquid medium containing 1.65 g of  $\text{NH}_4\text{NO}_3$ , 0.2 g of  $\text{KNO}_3$ , 0.002 g of  $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$ , 0.02 g of  $\text{KCl}$ , 0.2 g of  $\text{KH}_2\text{PO}_4$ , 0.9 g of  $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ , 0.2 g of  $(\text{NH}_4)_2\text{HPO}_4$ , 0.5 g of  $\text{NH}_4\text{-Tar}$ , 0.5 ml  
5 of  $\text{Fe-Cit}$ , 0.031 g of  $\text{H}_3\text{BO}_3$ , 0.01516 g of  $\text{MnSO}_3 \cdot 4\text{H}_2\text{O}$ , 0.0086 g of  $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$ , 0.00083 g of  $\text{KI}$ , 0.00025 g of  $\text{Na}_2\text{MoO}_4 \cdot 2\text{H}_2\text{O}$ , 100  $\mu\text{g}$  of Thiamine  $\text{HCl}$ , 1.0 g of malt extract, 0.5 g of yeast extract, 0.3 g of casein and 3.0 g of glucose per 1 L in water, adjusting pH of the medium to pH 5.5-5.6, and aliquotting the  
10 K-liquid medium onto the mixed soil;

aseptically germinating pine seeds up to 3 cm in length, planting the resulting aseptic seedlings into infection medium containing the mixed soil and the K-liquid medium, and covering the culture container with a lid; and

15 coculturing the pine seedling and the *T. matsutake* mycelia at 15-25°C for 24 hrs under 10-40,000 lux light intensity.